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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,059	05/29/2002	Frank Naumann	H 3939 PCT/US	6726

423 7590 08/25/2003

HENKEL CORPORATION  
2500 RENAISSANCE BLVD  
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GULPH MILLS, PA 19406

EXAMINER

LAMM, MARINA

ART UNIT	PAPER NUMBER
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1616

DATE MAILED: 08/25/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/088,059

**Applicant(s)**

NAUMANN ET AL.

**Examiner**

Marina Lamm

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 19-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

Claims 19-38 are pending in this application filed 05/29/02 which is a 371 application of PCT/EP00/08773 filed 9/8/2000.

#### *Election/Restrictions*

1. Upon Applicant's request, a subspecies of formula (I) in which only one of R1 to R4 is a C5 ring with the remaining ones being hydrogen or a hydroxyalkyl group and X being hydrogen, is being examined at this time. See p. 3 of the Response. The election of species as set forth in the Office Action dated 6/23/03 has been withdrawn. Therefore, the Applicant's arguments are rendered moot.

#### *Claim Rejections - 35 USC § 103*

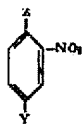
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

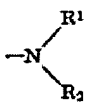
3. Claims 19-26, 28-30, 36 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bil (US 3,632,582) supplied by the Applicant.

Bil teaches nitro-p-phenylenediamine compounds suitable as hair dyes. See col. 2-3.

Specifically, Bil teaches the compounds of the following formula:



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wherein Y and Z might be , in which R<sub>1</sub> and R<sub>2</sub> might be identical or different and represent, inter alia, H and cycloalkyl radicals. See col. 2, lines 20-41. When R<sub>1</sub> and/or R<sub>2</sub> is cycloalkyl, it usually contains 5 or 6 carbon atoms. See col. 3, lines 46-47. Further, Bil exemplifies N-cyclohexyl-2-nitro-p-phenylenediamine compound in which one of the R<sub>1</sub>/R<sub>2</sub> radicals is C<sub>6</sub> ring (cyclohexyl) and the remaining R<sub>1</sub>/R<sub>2</sub> radicals are hydrogens. See col. 8, Example 10. Bil teaches a hair dye composition containing dye, ethanol, ethanolamine, Sodium N-methyl-N-oleoyl-taurate (surfactant), sodium carboxymethylcellulose and water. See col. 5, lines 35-55. The composition of Bil is free of oxidation dye precursors and is formulated to remain in contact with hair for 20 minutes as required by Claims 28 and 29. See col. 5, lines 48-61. The only difference between the closest disclosed species (i.e. N-cyclohexyl-2-nitro-p-phenylenediamine of Example 10) and the compound of Claims 22 and 26 (i.e. N-cyclopentyl-2-nitro-p-phenylenediamine), is that the closest disclosed species has C<sub>6</sub> ring as opposed to C<sub>5</sub> ring in the claimed compound. However, Bil expressly teaches that cycloalkyl radicals usually contain 5 or 6 carbon atoms. See above. Further, both compounds have the same utility, i.e. hair dyes. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the compound of Example 10 of Bil such that R is C<sub>5</sub> ring, as opposed to C<sub>6</sub> ring. One having ordinary skill in the art would have been motivated to do this to obtain another of the hair dying compounds disclosed by Bil, especially since Bil clearly suggests that cycloalkyl radical can contain 5 carbon atoms.

With respect to the limitation “wherein the 2-nitro-p-phenylenediamine derivative makes a reddish contribution to the overall color of the keratin fibers” recited in Claims 19 and

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38, this property is inherent to N-cyclopentyl-2-nitro-p-phenylenediamine. The Courts have held that a compound and all its properties are inseparable. See *In re Papsech*, 315 F2d. 381, 137 USPQ 43, (CCPA 1963).

4. Claims 27 and 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bil as applied to claim 23 above, and further in view of Rose et al. (US 4,900,327).

Bil applied as above. With respect to Claim 27, the Bil reference does not teach additional substantive dye. With respect to Claims 31-34, the Bil reference does not teach the claimed primary and/or secondary intermediates. However, Rose et al. teach hair dye compositions containing a substantive dye used either alone or in combination with other substantive dyes in order to achieve the desired hair color. See col. 3, lines 1-6. The hair dye compositions of Rose et al. may also contain oxidation dye precursors such as primary intermediates (e.g. aromatic amines containing another free or substituted hydroxy or amino moiety in the para or ortho position, diaminopyridine derivatives, 2,4,5,6-tetraaminopyrimidine) and secondary intermediates (couplers) (e.g. m-aminophenol, naphtols, resorcinol) in order to achieve the desired hair color. See col. 3, lines 10-25. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the hair dye composition of Bil such that to employ additional substantive dyes and/or oxidation dye precursors such as primary and/or secondary intermediates of Rose et al. One having ordinary skill in the art would have been motivated to do this to obtain compositions which would alter the color of hair to a desired degree as suggested by Rose et al.

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5. Claims 35 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bil as applied to claim 23 above, and further in view of Grollier et al. (US 4,566,875).

Bil applied as above. With respect to Claim 35, the Bil reference does not teach at least one anionic, cationic and/or nonionic polymer. With respect to Claim 37, the Bil reference does not teach at least one conditioning component. However, Grollier et al. teach using cationic polymers in hair dye compositions "to improve the feel of the hair and to make the hair easier to comb out", i.e. for their hair conditioning properties. See col. 13, lines 18-35. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the hair dye composition of Bil such that to employ cationic polymers. One having ordinary skill in the art would have been motivated to do this to obtain compositions having hair conditioning properties such as improved feel and detangling as suggested by Rose et al.

### *Conclusion*

6. No claim is allowed at this time.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marina Lamm whose telephone number is (703) 306-4541.

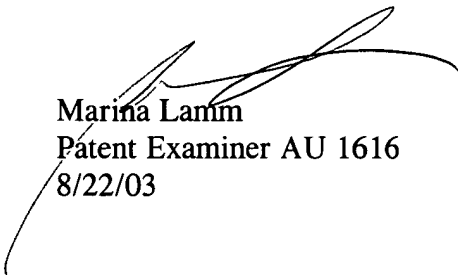
The examiner can normally be reached on Monday to Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page, can be reached at (703) 308-2927.

The fax phone number for the organization where this application or proceeding is assigned is (703) 308-4556.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.



Marina Lamm  
Patent Examiner AU 1616  
8/22/03